

DESCRIPTIONS OF NEW SPECIES OF CRABS OF THE
FAMILY OCYPODIDÆ.

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While studying Philippine and other Indo-Pacific crabs of the family Ocypodidæ in the United States National Museum, four new species were found which are not included in the material destined for special faunal reports. Three of these are fiddler crabs of the genus *Uca* (= *Gelasimus*) and the fourth is a *Macrophthalmus*.

UCA ZAMBOANGANA, new species.

Plate 74.

Type-locality.—Philippine Islands: Zamboanga, Mindanao; May, 1904; Dr. E. A. Mearns, United States Army; 6 males.

Type.—Cat. No. 43307, U.S.N.M.

Dimensions.—Type male, length of carapace 17.6 mm., width 29.8 mm.; largest male, length of carapace 23.4 mm., width 39.5 mm.

A large species, belonging to that section of the group of narrow-fronted species in which the lower margin of the orbit has an accessory row of granules above it.

Carapace one and two-third times as broad as long; the orbital margin nearly transverse, the convex portion inclined very slightly backward, separated by a deep sinus from the outer angle, which is acute and points obliquely forward; side margins raised and very sinuous, the anterior part nearly straight, posterior curving strongly inward; dorsal surface deeply sulcate; frontal furrow narrow-triangular, sides concave, tip blunt-pointed; accessory row of granules above the lower margin of the orbit occupying nearly the whole length of the orbit, but not reaching to the inner end and rarely to the outer end, composed of from 20 to 22 fine granules and lying close to the margin.

The large cheliped, which in four out of six males lies on the right side, and in two males on the left side, is very broad and strong; inner margin of arm granulate, not prominent; granules of wrist and palm

of median size; upper and lower margins of palm marked off by an impressed line; oblique line of inner surface not very prominent, with one row of tubercles; the convexity of the lower margin of the propodus is interrupted by a very shallow sinus behind the thumb; fingers broad and flat, intervening space narrower than either finger; a very shallow groove through the middle of each finger and a deep groove on the proximal half of the dactylus near the upper edge; prehensile edges each with two teeth, one near the tip and one near the middle, that on the dactylus proximal to that on the immovable finger.

The largest specimen has a proportionately large claw, but with a shorter palm, and the movable finger is devoid of a tooth at the middle; median groove obsolete; immovable finger broken off at the base. This form apparently corresponds to that which is known in various other species of fiddlers where the claw may have a very short palm and simpler fingers as compared to the normal form in that species.

Ambulatory legs with the merus joints expanded, the upper surface with few granules, upper edge distinctly serrated.

This species may be distinguished by its almost transverse anterior margin, the very long accessory row of granules above the lower margin of the orbit, and by the triangular-oblong frontal furrow.

UCA MEARNSI, new species.

Plate 75, figs. 1 and 2.

Type-locality.—Philippine Islands: Davao, Mindanao; Dr. E. A. Mearns, United States Army; 1 female.

An additional female was taken at Negros Island by Dr. Bashford Dean.

Type.—Cat. No. 43383, U.S.N.M.

Dimensions.—Type female, length of carapace 14.2 mm., width 21.2 mm.

This species is represented only by females.

Carapace one and one-half times as broad as long, very convex or almost semicylindrical; surface coarsely granulate, although the granules are scarcely visible to the unaided eye; the branchio-cardiac is the deepest of the dorsal furrows; supraorbital margins nearly transverse, very sinuous; the acutely angled anterior tooth is directed obliquely forward; lateral margins granulate and obtusely angled a little behind the anterior angle; frontal furrow narrow-oblong, tip arcuate; an accessory row of granules above the lower margin of the orbit, occupying less than one-third the length of the orbit and composed of seven or eight granules; the row begins at the outer end close to the margin, but inwardly diverges from it, being in front view transverse or parallel to the eyestalk when folded in the orbit.

Ambulatory legs rougher than usual, the merus joints very wide (that of last pair twice as long as wide), their margins strongly serrulate, granules of dorsal surface coarse, scabrous, and rather numerous.

This species in shape approaches *U. zamboangana*, but is much narrower, even considering the difference in the sexes; frontal furrow with parallel instead of converging sides; the accessory row of granules on the lower orbit much shorter and not following the line of the orbital margin.

It also resembles *U. arcuata* (de Haan), but that species has very sinuous side margins and no accessory granules on the lower orbit.

UCA NOVÆGUINÆ, new species.

Plate 76.

Type-locality.—New Guinea; 2 males, one left-handed, one right-handed; received from the Linnean Society, Sydney, New South Wales.

Type.—Cat. No. 6374, U.S.N.M.

Dimensions.—Male, length of carapace 9.3 mm., width 16 mm.

Allied to *U. gaimardi* (Milne Edwards),¹ from which it differs in the following particulars: Sides of the carapace more strongly convergent, so that the lateral angles are narrower, and project more sideways; the front is correspondingly narrower, being less than one-fifth of the width of the carapace.

While the large cheliped of the male is of the same general pattern as in *U. gaimardi*, the palm lacks the deep triangular depression at the base of the index, so characteristic of that species; the granulation is finer; the furrow just below the superior marginal line of granules is not deeply impressed; the oblique ridge on the inner surface is more prominent and marked with a single row of about eight large granules and several smaller ones; as in *gaimardi* the slender fingers are devoid of a groove on the outer surface, and the index has a tooth at its middle and a smaller one near the tip; the dactylus, instead of two enlarged denticles dividing it into three subequal spaces, has three denticles, one of which is not far from the tip, and the space proximal to which is divided into three subequal spaces.

In the shape of the carapace this species approaches *U. triangularis* (Milne Edwards), but that species has the sides still more convergent, the anterior border of the front more truncate, the movable finger longitudinally grooved.

A young left-handed male from Zamboanga, Mindanao, Philippine Islands, Dr. E. A. Mearns, collector, December, 1903, probably belongs to this species. Carapace 5.8 by 9.6 mm. Front about one-fifth width of carapace, its lower edge a little straighter than in the typical specimens; inner and lower margins of arm of large cheliped

¹ *Gelasimus Gaimardi* Milne Edwards, Ann. Sci. Nat., Zool. (3), vol. 18, 1852, p. 150 [114], pl. 4, fig. 17.

more coarsely and sharply granulate; the distal of the two vertical rows of granules inside the palm is composed of very fine granules; the three denticles on the movable finger are all more proximally placed, and the intermediate one has a much smaller space on its proximal than on its distal side.

While it is possible that this specimen represents a new species, it is too undeveloped to be described as such.

MACROPHTHALMUS CRINITUS, new species.

Plate 75, fig. 3.

Macrophthalmus, sp., DE MAN, Abh. Senckenb. naturf. Ges., vol. 25, 1902, p. 495.

Macrophthalmus pacificus RATHBUN, Bull. Mus. Comp. Zool., vol. 52, 1910, p. 307, pl. 1, fig. 3. Not *M. pacificus* Dana (1851), de Man (1890)

Type-locality.—Moluccas: Amboyna; Thomas Barbour; 1 male type, 1 female, 1 young (M.C.Z.); 1 male, 1 female (U.S.N.M.).

Type.—Cat. No. 7259, M.C.Z.

Paratypes.—Cat. No. 39493, U.S.N.M.

Dimensions.—Type male, length of carapace 11.2 mm., width 15.3 mm., width of front below 2.5 mm.

Carapace convex, smooth and punctate in the highest portions, irregularly granulate elsewhere; a short oblique granulate line above the last leg; details of surface obscured by coarse hairs. Carapace widening from the anterior angles to the posterior part of the second tooth; behind this point the sides are nearly parallel, but somewhat sinuous; upper margin of orbit very sinuous, directed forward at the antero-lateral tooth; first sinus of the lateral margin triangular; second tooth forming nearly a right angle; third tooth minute. Front slightly constricted, lower edge faintly bilobed. Orbit finely crenulate above, coarsely denticulate below; eyes not reaching end of orbits.

Suture between ischium and merus of outer maxillipeds slightly oblique; outer margin of ischium longitudinal. Chelipeds of male with the merus-joint densely clothed with coarse hair on the lower surface and on the infero-distal part of the inner surface; long fine hairs on the upper, inner, and distal margins; wrist and palm evenly granulate on outer surface, a faint ridge near lower margin of distal end of palm continued more distinctly on immovable finger; upper and lower edges of palm rounded; dactylus with a large truncate tooth behind the middle; the coarsest and most prominent denticulation of the immovable finger is near the distal end. Legs long-hairy above and on the margins; distal tooth of merus-joints small, concealed in dorsal view by the hair; merus of third leg a little less than two and one-half times as long as wide.

Variations.—Specimens smaller than the type have a larger smooth (not granulate) space on the carapace; the lower edge of the front

is scarcely bilobed; the ridge on the palm is strong and the upper edge marginate, both in undeveloped males as well as in females.

The species differs from *M. pacificus* Dana¹ in its greater hairiness; in the upper margin of the orbit trending forward at its outer end instead of backward; in the carapace being more quadrate in shape and without sharp lines of granules on the branchial region; in the front having a narrow rim of even width throughout, while in *pacificus* the rim widens along the sides from above downward, so that while the front in its entirety is constricted, the depressed or middle portion of it is not constricted but narrows downward; the tooth on the movable finger plays into a cavity in the immovable finger, while in *pacificus* it moves against or toward an elevation on the immovable finger.

De Man in 1902² contrasts a female without locality label, which he described in 1890,³ with a female from Tobelo, Halmahera, and thinks that the former may not be *M. pacificus*, as he thought in 1890, because Dana's figure does not show the granular lines on the carapace. De Man further thinks that the Halmahera specimen may be *pacificus* and the 1890 specimen *bicarinatus* Heller.

The 1890 specimen is the same species, I think, as the specimens called *pacificus* in the present paper, while the Halmahera specimen (*Macrophthalmus*, sp., de Man) is the one described here as *crinitus*. The reasons why I attach the name *pacificus* to the former instead of the latter are (1) the shape of the carapace; (2) the depressed portion of the front narrows forward, as it appears to in Dana's figure; (3) the shape and hairiness of the legs correspond; (4) the spine on the meropodites is sharp and plainly visible, which it is not in *crinitus*.

Dana describes the carapace of *pacificus* as "naked and smooth" and figures no granular lines, but the postero-lateral regions are represented as pubescent in the illustration. His type was an immature male of small size; perhaps the lines were inconspicuous.

Heller's figure of *M. bicarinatus*⁴ is too unlike the species under consideration to be united with either.

¹ U. S. Expl. Exp., vol. 13, Crust., pt. 1, 1852, p. 314; atlas, 1855, pl. 19, fig. 4 a-c.

² Abh. Senckenb. naturf. Ges., vol. 25, pp. 495-499.

³ Notes Leyden Mus., vol. 12, p. 79.

⁴ Reise Novara, Crust., 1865, pl. 4, fig. 2.

EXPLANATION OF PLATES.

PLATE 74.

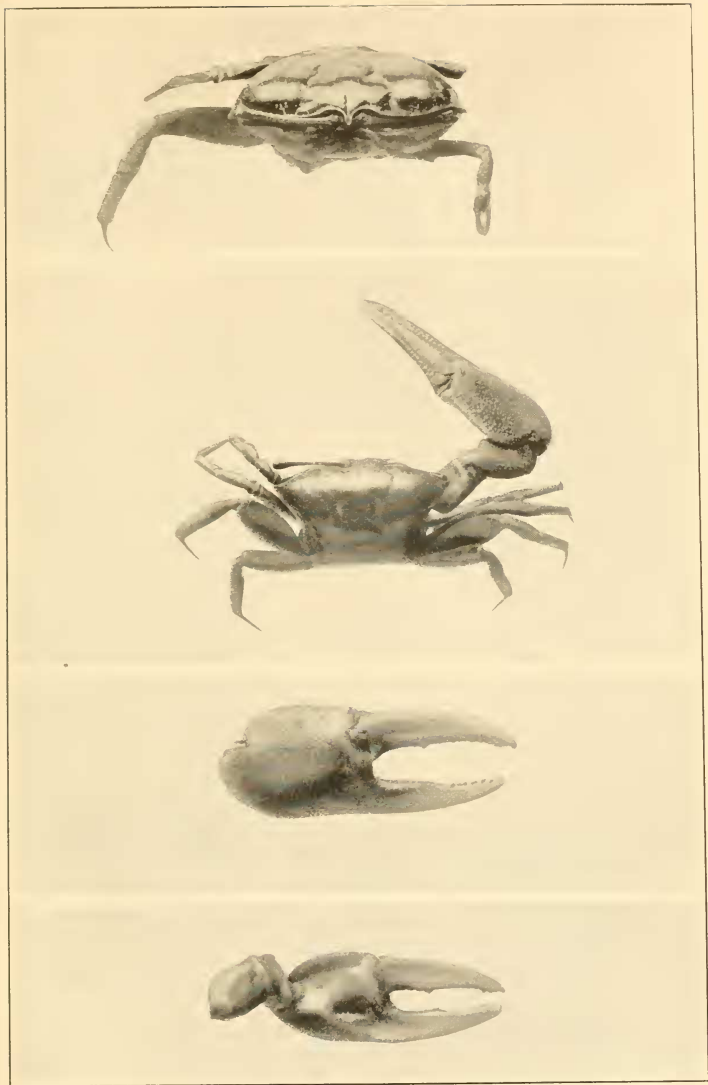
- Fig. 1. *Uca zamboangana*, front view of male, natural size.
2. *Uca zamboangana*, dorsal view of type male, natural size.
3. *Uca zamboangana*, outer view of large (right) chela of a third male, natural size.
4. *Uca zamboangana*, inner view of large (left) chela of a fourth male, natural size.

PLATE 75.

- Fig. 1. *Uca mearnsi*, front view of type female, $\times 2$.
2. *Uca mearnsi*, dorsal view of type female, $\times 2$.
3. *Macrophthalmus crinitus*, ventral view of type male, $\times 2$.

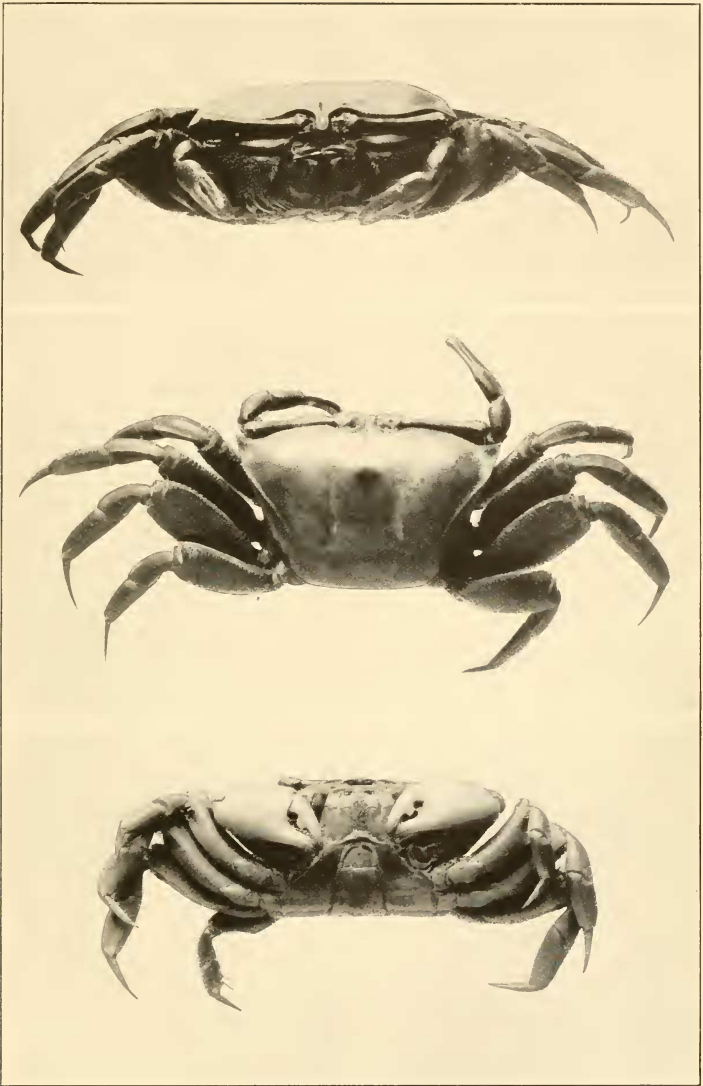
PLATE 76.

- Fig. 1. *Uca novæguineæ*, front view of type male, $\times 2$.
2. *Uca novæguineæ*, dorsal view of type male, $\times 2$.
3. *Uca novæguineæ*, outer view of large chela of same, $\times 2$.
4. *Uca novæguineæ*, inner view of same, $\times 2$.



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FOR DESCRIPTION OF PLATE SEE PAGE 620.



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